University of Tripoli - Faculty of Engineering

Department of Electrical and Electronics Engineering

EE302 Signals and Systems - Dr Ali Ganoun

1st Mid-Term Exam, 5 November 2017, Time allowed: 1:30 h

Answer all questions:

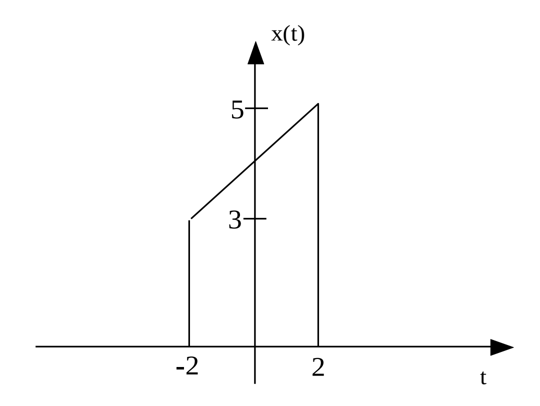
[2] **Q1** – For the system described by the DE $\acute{y}(t) - 2y(t)^2 = x(t)$, Is the system is linear? Justify your answer.

[5] **Q2** – Given $x_1(t) = 2u(t) - 2u(t-5)$ and $x_2(t) = e^{-t}u(t)$, find and plot:

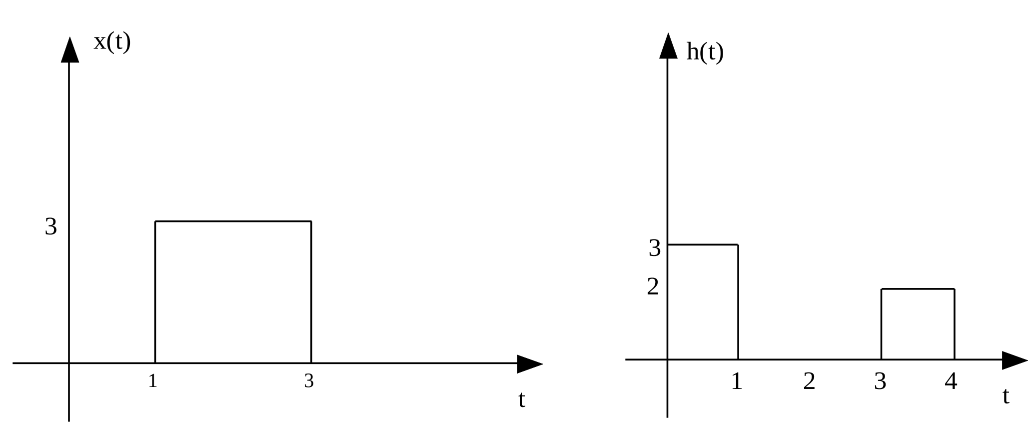
$a)\ y(t) = x(2t)$

$b)\ y(t) = x(-0.4t + 1)$

[4] **Q3** – Find the even and odd parts of the shown signal:



[4] **Q4** – Find and sketch $c(t) = x(t) * h(t)$ for the functions illustrated in the figure below.



GOOD LUCK

[Type here]